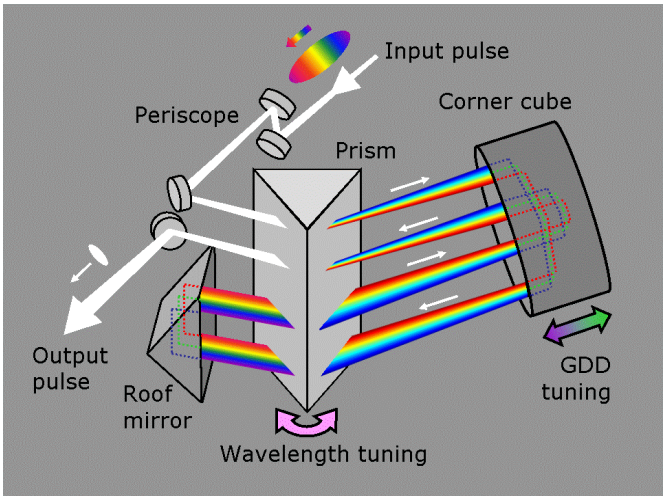
BOA™ Grating Pulse Compressor Specifications (IR Wavelengths)

Pulse compressor model:	BOA-G-800	BOA-G-1030	BOA-G-1550
Wavelength range:	750 nm - 850 nm	1010 nm - 1050 nm	1525 nm - 1575 nm
Max neg. GDD @ center wavelength*:	-2.5×10^6 fs^2	-2×10^8 fs^2	-2.4×10^7 fs^2
Transmission @ shortest wavelength: @ center wavelength*:	> 60% > 70%	> 70% > 85%	> 60% > 70%
Max bandwidth @ maximum GDD**: @ half-maximum GDD :	20 nm 50 nm	2 nm 5 nm	20 nm 35 nm
Maximum peak power:	500 MW		
Total additional beam path:	< 1.5 m		
Pulse repetition rate:	Any		
Angular dispersion (dθ/dλ) added:	0		
Pulse-front tilt (dt/dx) added:	0		
Spatial chirp (dx/dλ) added:	0		
1D beam magnification:	1		
Output/input beam collinearity:	< 10 mrad		
Required input polarization:	Horizontal		
Polarization rotation:	<0.1°		
Required input-beam diameter:	1 – 4 mm (collimated)		
Input-beam lateral-displ. tolerance:	1 mm		
Number of alignment knobs:	Zero		
Time to set up:	~ 10 minutes		
Dimensions (L x W x H):	46 cm x 13.5 cm x 16 cm		
Weight:	~ 5 kg		

* Center wavelength in nanometers is the number following the "BOA-G-" in the device model.
** As with all dispersive pulse compressors, the maximum bandwidth is limited by beam clipping on the second pass through the grating and so depends on the grating-corner-cube separation (and hence the device's maximum negative GDD). A unique advantage of the BOA single-grating/corner-cube design, which tunes GDD by varying this separation, however, is that, if less than the full negative GDD is needed, the beam path will be shorter, and, as a result, the compressor can accommodate a pulse with a larger bandwidth.

Additional Notes

- The added angular dispersion, pulse-front tilt, and spatial chirp can be shown to always be identically zero and were all immeasurable in our experiments.
- If your beam is larger than 4 mm, please let us know, and we can easily design a pulse compressor with a larger aperture at no extra cost.
- Alignment of the pulse compressor into a beam is achieved using a simple trick: back-reflection off a removable glass window (provided) is used to make sure the beam is incident perpendicularly to the compressor-axis. Once you do this, simply remove the window. You are all set to compress your pulses.
- The pulse compressor itself is auto-aligning, so no alignment knobs are required for internal components.
- Motorized and computer-controlled versions are available upon request.



Layout for the BOA single-prism pulse compressor

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